

TECHNICAL EXHIBIT
IN SUPPORT OF MODIFICATION TO THE
CONSTRUCTION PERMIT FOR STATION WKTB-CA (FACILITY ID 35418)
NORCROSS, GEORGIA

SEPTEMBER 16, 2010

CH 47 12.5 KW (MAX-DA)

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Technical Narrative

This technical statement was prepared in support of an application to modify the digital authorization for Class A television station WKTB-CA at Norcross, Georgia. Station WKTB is licensed for analog operation on channel 38, but holds a granted construction permit to displace to digital operation on channel 47, with a directional antenna maximum effective radiated power (ERP) of 15 kilowatts (kW) (DA) and an antenna radiation center height above mean sea level (RCAMSL) of 431.2 meters.¹

The applicant purchased an AND/ERI, model ALP16L2-HSOC-47 (16-bay) directional antenna similar to that authorized (both have the same “omnioid” horizontal pattern shape). However, it was determined after the fact that the currently leased space on the tower was not adequate to accommodate this antenna. Thus, the applicant modified the 16-bay antenna to a physically shorter “12-bay” version to allow it to fit within the available space on the tower. This new shorter antenna resulted in a reduction in gain as well as a higher center of radiation more than +2 meters. The 1 kW transmitter that WKTB intended to use was no longer able to achieve the authorized 15 kW ERP due to the lower antenna gain. Therefore, this application is being filed to (1) reduce the proposed directional ERP, (2) increase the antenna RCAMSL and (3) slightly modify the antenna relative field pattern to reflect the new antenna model.

¹ See BDISDTA-20090414AGF

While the FCC's OET Bulletin No.69 interference program indicates a small amount of interference to replacement translator station WSB-LD (BDRTCT-20090320AFV), this modification, herein, will not cause any additional calculated interference to WSB-LD than the currently authorized digital WKTG-CA channel 47 facility.

Proposed Facilities

This application proposes digital operation on channel 47, at the current transmitter site, using a new directional antenna. The antenna structure registration number is 1018919 (see Figure 1). An AND/ERI, model ALP12L2-HSOC-47, "omnioid" directional antenna will be installed with the radiation center at the 102.4 meter (336 foot) level on the existing tower. This "off-the-shelf" antenna is specifically described in the FCC's antenna database with make: "AND", model: "ALP12L2-HSOC". The proposed ERP is 12.5 kW and the antenna RCAMSL will be 434.6 meters.

Figure 2 is a map showing the authorized and proposed 51 dBu coverage contours. As can be seen on the map, there is common area where both contours overlap, and there is no enlargement of the contour along any azimuth.

Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending digital TV or analog or digital LPTV/translator/Class A stations. Using the procedures outlined in the FCC's OET-69 Bulletin, a **non-standard 1 kilometer grid and 0.2 kilometer terrain distance increment**, and 2000 U.S. Census, the proposal complies with the current FCC policy to other pertinent assignments, with the exception of replacement translator WSB-LD at Gainesville, Georgia (BDRTCT-20090320AFV).

Interference studies based on the procedures outlined in FCC OET Bulletin No.69 (using a non-standard 1 kilometer grid and 0.2 kilometer terrain distance increment and 2000 Census) indicate that the proposed WKTb-CA modification will cause new interference in the amount of 2.1% of the WSB-LD service population. This exceeds the 2.0% limit and “fails” the OET-69 program. However, when compared to the current granted WKTb-DC channel 47 construction permit that is being modified herein, the OET-69 interference program (with the same input settings) indicates that it will NOT cause any new interference to the WSB-LD operation. Figure 3 is a summary of the before and after OET-69 interference results. The summary includes only information pertaining to WSB-LD. There are no other prohibited interference issues to other stations from the WKTb-CA proposal.

Radiofrequency Electromagnetic Field Exposure

The licensed FM facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. Based on a conservative downward relative field value of 0.3, the calculated power density at a point 2 meters above ground level will not exceed 0.004 mW/cm^2 , which is less than 1% of the FCC's recommended limit of 0.45 mW/cm^2 for channel 47, applicable to general population/uncontrolled exposure areas.

Access to the transmitting site tower is restricted and appropriately marked with warning signs. As this is a multi-user site, an agreement between the users will control site access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The licensed operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process (ASRN:1018919).



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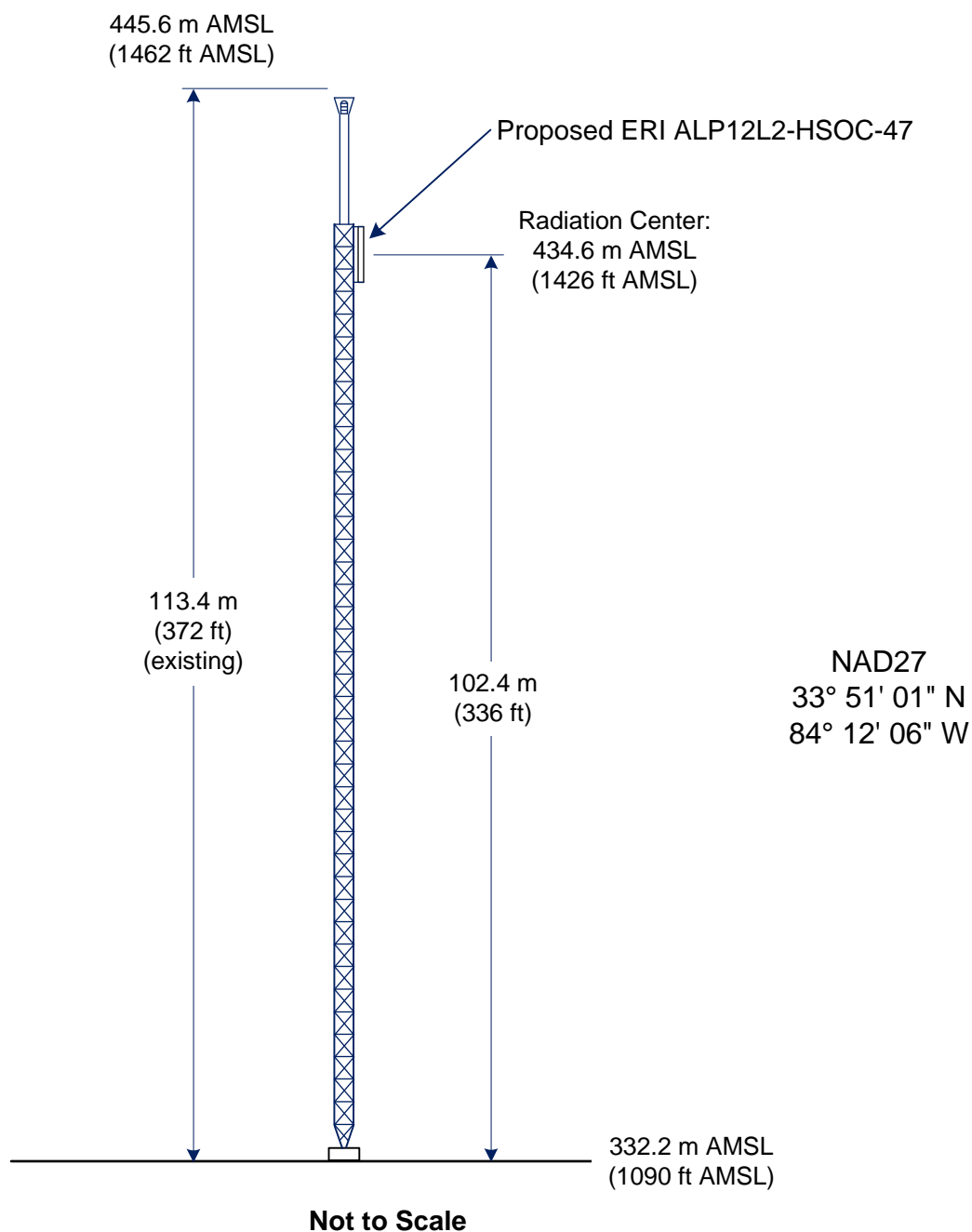
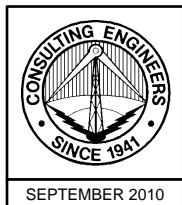
September 16, 2010

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WKTB-CA RF Transmission System Specifications

Description	System
Transmitter Power Output (0.95 kW):	-0.22 dBk
Transmission Line Loss - 382 feet of 1-5/8" (61% efficient):	2.13 dB
ERI ALP12L2-HSOC-47 Antenna (21.5 Power Gain):	13.32 dB
Effective Radiated Power (12.5 kW):	10.97 dBk

Registration No. 1018919



PROPOSED ANTENNA AND EXISTING SUPPORTING STRUCTURE

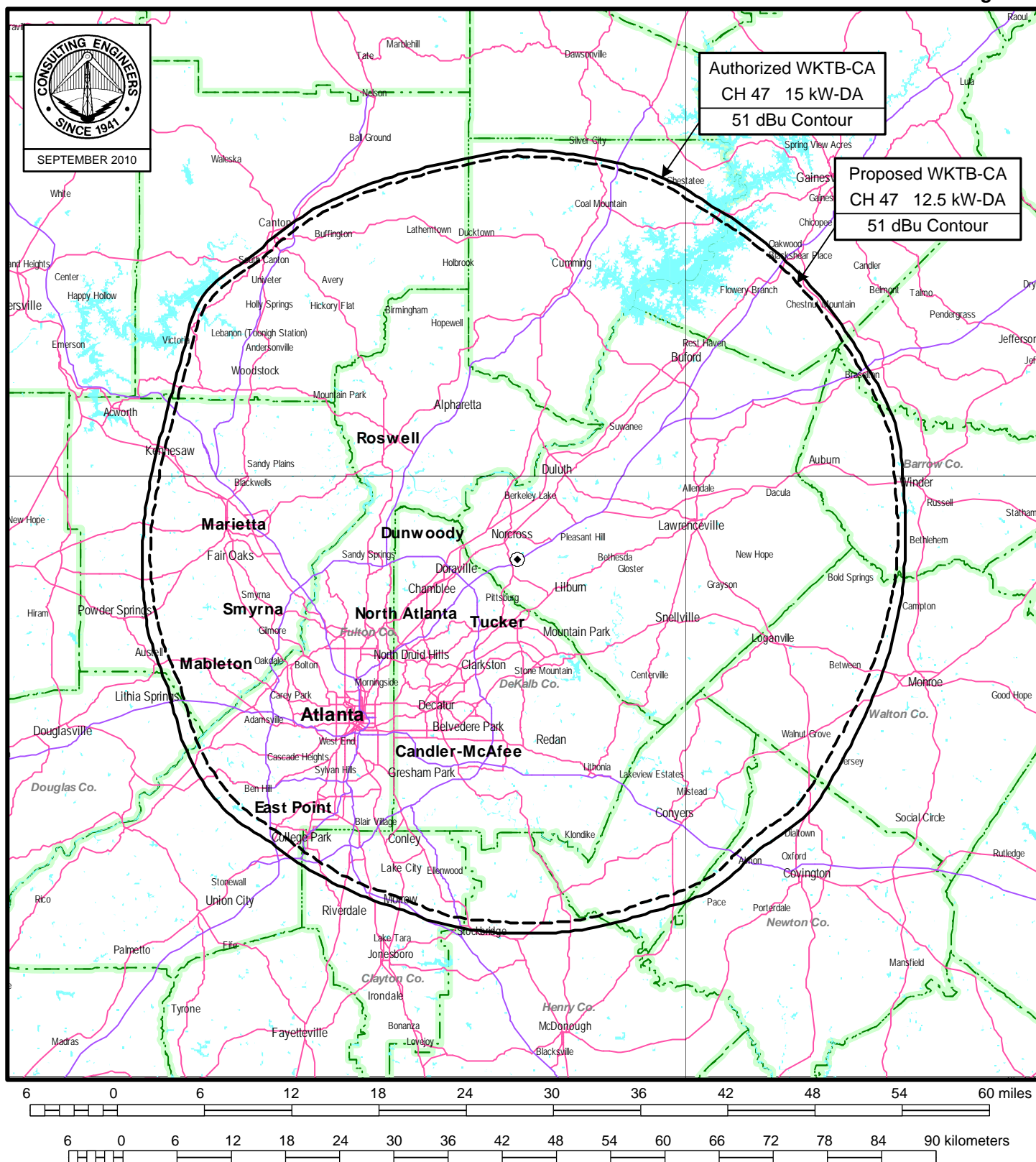
STATION WKTB-CA

NORCROSS, GEORGIA

CH 47 12.5 KW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 2



PREDICTED COVERAGE CONTOURS

STATION WKTBCA

NORCROSS, GEORGIA

CH 47 12.5 kW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida

OET-69 INTERFERENCE ANALYSIS SUMMARY WITH RESPECT TO WSB-LD

Percent allowed new interference: 0.500
 Percent allowed new interference to non Class A LPTV: 2.000
 TW Census data selected 2000
 Data Base Selected
 /export/home/cdb/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 09-16-2010 Time: 16:55:25
 Record Selected for Analysis

WKTB-CA USERRECORD-01 NORCROSS XX US
 Channel 47 ERP 12.5 kW HAAT 141. m RCAMSL 00435 m STRINGENT MASK
 Latitude 033-55-01 Longitude 0084-12-06
 Status APP Zone 2 Border Site number: 01
 Dir Antenna Make CDB Model 00000000016374 Beam tilt N Ref Azimuth 0.
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 1.0 km/side
 Distance Increments for Longley-Rice Analysis 0.20 km

Facility (site # 01) meets maximum height/power limits

Site number	1		
Azimuth	ERP	HAAT	51.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	12.500	135.0	44.8
45.0	9.968	133.3	43.5
90.0	5.578	154.9	42.0
135.0	4.736	154.6	41.1
180.0	5.712	122.9	39.9
225.0	4.736	146.8	40.6
270.0	5.578	133.2	40.5
315.0	9.968	147.9	44.5

Contour Overlap to Proposed Station

Station
 WDGA-CA 47 DALTON GA BDISDTA20090819AGT causes

Contour overlap to Digital LPTV station
 WKTB-CA 47 NORCROSS XX USERRECORD01

Station
 WKTB-CA 47 NORCROSS GA BSTA20090615AFX

Station inside contour of Digital LPTV station
 WKTB-CA 47 NORCROSS XX USERRECORD01

Station
 WKTB-CA 47 NORCROSS GA BDISDTA20090414AGF

Station inside contour of Digital LPTV station
WKTG-CA 47 NORCROSS XX USERRECORD01

Station
WUVG-DT 48 ATHENS GA BLCDDT20030805AJO

Station inside contour of Digital LPTV station
WKTG-CA 47 NORCROSS XX USERRECORD01

Contour Overlap Evaluation to Proposed Station Complete

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations
Proposed facility OK toward West Virginia quiet zone
Proposed facility OK toward Table Mountain
Proposed facility is beyond the Canadian coordination distance
Proposed facility is beyond the Mexican coordination distance
Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
47	WKTG-CA	NORCROSS XX	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
32	WANN-CA	ATLANTA GA	23.5	LIC	BLTTL	-19991214ABG
32	WANN-CA	ATLANTA GA	17.6	CP	BPTTA	-20091130APP
32	WDMA-CA	MACON GA	129.2	LIC	BLTTL	-19970818JA
33	WCAG-LP	LA GRANGE GA	123.2	LIC	BLTTL	-19891128JR
43	WDGA-CA	DALTON GA	117.9	LIC	BLTTL	-19910211IF
45	WYGA-CA	ATLANTA GA	24.1	APP	BSTA	-20080908AAR
45	WYGA-CA	ATLANTA GA	24.1	APP	BPTTA	-20040107AMV
46	W46EM-D	ATHENS GA	122.3	CP	BNPDTL	-20090825AJM
46	W46EK-D	AUGUSTA GA	197.8	CP	BNPDTL	-20090825ADI
46	WSB-TV	GAINESVILLE GA	39.2	CP	BDRTCT	-20090320AFV
46	WNNG-LD	WARNER ROBINS GA	142.8	CP	BNPDTL	-20090825ADP
46	W46AX-D	BRYSON CITY NC	178.2	LIC	BLDTT	-20090615AAU
47	W49AY	BIRMINGHAM AL	245.9	APP	BSTA	-20051101ABI
47	W62CK	BIRMINGHAM AL	250.3	APP	BPTTL	-20020725AAX
47	W49AY	BIRMINGHAM AL	245.9	CP	BDISTTA	-20080804AEH
47	W47DK	ENTERPRISE AL	327.2	CP	BNPTTL	-20000828ANW
47	W46CF	MOULTON AL	288.1	APP	BDISTTTL	-20060324AAB
47	WOIL-LP	TALLADEGA AL	193.9	LIC	BLTTL	-19950531IR
47	NEW	JENNINGS FL	383.0	APP	BNPDTL	-20100510ACE
47	W47DR-D	MARIANNA FL	365.4	CP	BNPDTL	-20090825AXB
47	WWWF-LP	TALLAHASSEE FL	380.7	APP	BSTA	-20090902ACD
47	WWWF-LP	TALLAHASSEE FL	380.7	APP	BSTA	-20070718AEY
47	WWWF-LP	TALLAHASSEE FL	380.7	LIC	BLTTL	-20010711AAK
47	NEW	ATHENS GA	122.3	APP	BNPDTL	-20090825AJH
47	W47BX	COLQUITT GA	301.6	LIC	BLTTL	-20001219AAD
47	NEW	COLUMBUS GA	172.5	APP	BNPDTL	-20100423ACK

47	WDGA-CA	DALTON GA	117.7	CP	BDISDTA	-20090819AGT
47	WWPD-LD	DOUGLAS GA	295.4	CP	BDCCDTL	-20061026ADS
47	NEW	LENOX GA	296.7	APP	BNPDTL	-20100510ABK
47	W47DT-D	MILLEDGEVILLE GA	135.2	CP	BNPDTL	-20090825ACE
47	WKTB-CA	NORCROSS GA	0.0	CP	BDISDTA	-20090414AGF
47	NEW	SOPERTON GA	233.0	APP	BNPDTL	-20100510AHI
47	WKUG-LP	BOWLING GREEN KY	399.4	CP	BDISDTL	-20090908AEU
47	WJZY	BELMONT NC	321.6	LIC	BLCDDT	-20080717AAP
47	W57BG	CANTON/WAYNESVILLE NC	218.3	CP	BDISDTT	-20060316ACS
47	W57BG	CANTON/WAYNESVILLE NC	218.3	APP	BDISDTT	-20090824ACK
47	W47DM-D	CULLOWHEE NC	180.3	LIC	BLDDT	-20090615AAQ
47	WZRB	COLUMBIA SC	295.6	CP MOD	BMPCDT	-20080620AJF
47	W31BU	GREENVILLE SC	199.9	APP	BPTTL	-20011018AFO
48	WUVG-DT	ATHENS GA	17.6	LIC	BLCDDT	-20030805AJO
48	NEW	AUGUSTA GA	185.5	APP	BNPDTL	-20100421ABQ
48	NEW	BYRON GA	150.4	APP	BNPDTL	-20100510AFQ
48	W48DR-D	GAINESVILLE GA	101.5	CP	BNPDTL	-20090825AGJ
48	NEW	MONTROSE GA	180.6	APP	BNPDTL	-20100510AGY
48	WOOT-LD	CHATTANOOGA, ETC. TN	174.2	CP	BDCCDTL	-20061030ANR
49	DW49AD	CARROLLTON GA	85.0	APP	BSTA	-20090515AAQ
49	WDNN-CA	DALTON GA	117.7	LIC	BLTTTL	-20020319ABG
49	W49DE	MARIETTA GA	28.6	LIC	BLTT	-20071127AGO
50	WAGC-LP	ATHENS GA	75.6	APP	BSTA	-20080623AAK
50	WAGC-LP	ATHENS GA	75.6	LIC	BLTTTL	-20090921AAK
50	W50AB	HIAWASSEE GA	123.1	LIC	BLTT	-20021204AAM
55	WYGA-CA	ATLANTA GA	41.3	LIC	BLTTTL	-20020308ABH

[illegible]

Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	WSB-TV	GAINESVILLE GA	BDRTCT -20090320AFV

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
45	WYGA-CA	ATLANTA GA	62.7	APP	BPTTA	-20040107AMV
46	WHNT-DR	HUNTSVILLE AL	254.4	APP	BPRM	-20080619ALW
46	WHNT-TV	HUNTSVILLE AL	254.4	CP	BPCDT	-20090313ABX
46	WMCF-TV	MONTGOMERY AL	289.5	CP MOD	BMPCDT	-20090323ADG
46	WMCF-TV	MONTGOMERY AL	289.5	LIC	BLCDT	-20060620ABX
46	W46EM-D	ATHENS GA	97.4	CP	BNPDTL	-20090825AJM
46	W46EK-D	AUGUSTA GA	178.7	CP	BNPDTL	-20090825ADI
46	WCTV	THOMASVILLE GA	384.1	LIC	BLCDT	-20050815AAA
46	WPHJ-CA	VIDALIA GA	247.9	LIC	BLTTL	-19950206IC
46	WNNG-LD	WARNER ROBINS GA	155.5	CP	BNPDTL	-20090825ADP
46	W46AX-D	BRYSON CITY NC	146.8	LIC	BLDTT	-20090615AAU
46	W46EC-D	CANTON, ETC. NC	182.4	LIC	BLDTT	-20090126ABM
46	W46DC	KNOXVILLE TN	207.3	LIC	BLTT	-20020322AAF
46	WDLE-LP	PIGEON FORGE TN	188.2	LIC	BLTTL	-20080211ABC
47	WKTB-CA	NORCROSS GA	39.2	CP	BDISDTA	-20090414AGF
47	WKTB-CA	NORCROSS XX	39.2	APP	USERRECORD-01	

Total scenarios = 6

Result key: 1
Scenario 1 Affected station 10
Before Analysis

Results for: 46A GA GAINESVILLE BDRTCT 20090320AFV CP
HAAT 320.0 m, ATV ERP 5.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	914016	5006.9
not affected by terrain losses	911213	4986.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	74958	129.9
lost to ATV IX only	74958	129.9
lost to all IX	74958	129.9

Potential Interfering Stations Included in above Scenario 1

46A AL HUNTSVILLE	BPCDT	20090313ABX	CP
46A AL MONTGOMERY	BMPCDT	20090323ADG	CP
46A GA ATHENS	BNPDTL	20090825AJM	CP
46A GA WARNER ROBINS	BNPDTL	20090825ADP	CP
47A GA NORCROSS	BDISDTA	20090414AGF	CP

After Analysis

Results for: 46A GA GAINESVILLE BDRTCT 20090320AFV CP
HAAT 320.0 m, ATV ERP 5.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	914016	5006.9
not affected by terrain losses	911213	4986.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	74958	129.9
lost to ATV IX only	74958	129.9
lost to all IX	74958	129.9

Potential Interfering Stations Included in above Scenario 1

46A AL HUNTSVILLE	BPCDT	20090313ABX	CP
46A AL MONTGOMERY	BMPCDT	20090323ADG	CP
46A GA ATHENS	BNPDTL	20090825AJM	CP
46A GA WARNER ROBINS	BNPDTL	20090825ADP	CP
47A GA NORCROSS	BDISDTA	20090414AGF	CP
47A XX NORCROSS	USERRECORD01		APP

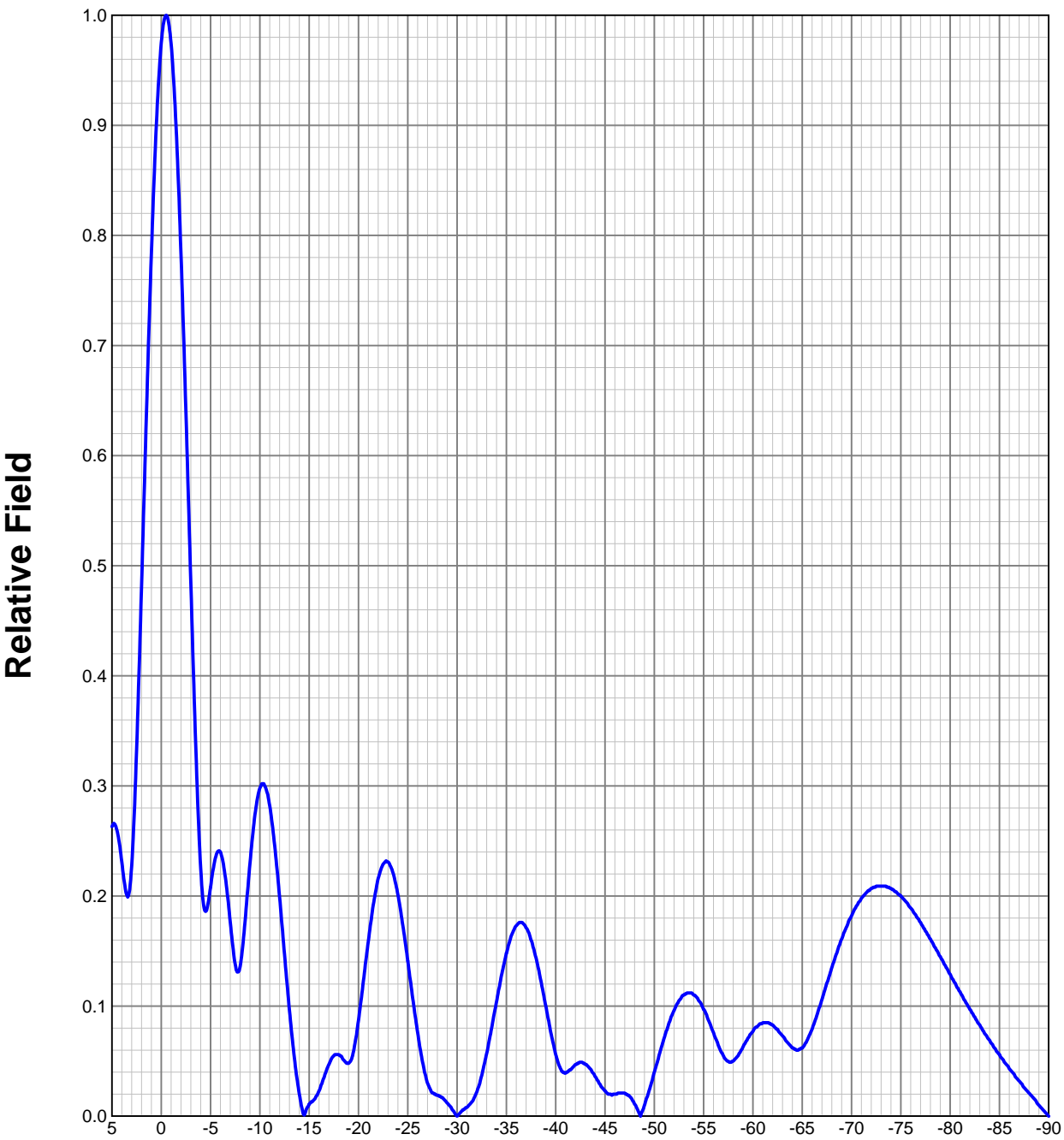
Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

**Note-For purposes of this study the digital companion channel records for WKTb-LD as well as digital STA, all on channel 47 were removed: 20080828ABJ, 20090402AOZ, 20090615AFX. This was done so that the proposal could be compared directly to the current granted WKTb-CA channel 47 construction permit being modified by this application.*

ELEVATION PATTERN

Type:	ALP12L2		Channel:	47
Directivity:	Numeric	dBd	Location:	
Main Lobe:	12.64	11.02	Beam Tilt:	-0.50
Horizontal:	12.02	10.80	Polarization:	Horizontal



Preliminary, subject to final design and review.